

ABSTRACT

1 This invention improves the perceived quality of
2 frequency-domain time scale modification by selection of
3 spectral bands used in phase locking based upon a Bark scale
4 according to the variation in human hearing frequency
5 response. A spectral peak is identified for each band. At
6 these peaks the phases are rotated using the phase vocoder
7 algorithm. For a few spectral lines near these peaks, the
8 phase differences are copied from the non-rotated spectrum.
9 The number selected is preferably 4. Remaining spectral lines
10 within each spectral band located farther from the peak are
11 phase rotated using the phase vocoder algorithm. The
12 boundaries of the spectral bands may be adjusted based upon
13 the digital audio data to maintain important frequency groups
14 within the same spectral band.